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SEMICONDUCTOR, INC., MATROX ELECTRONIC
7 SYSTEMS, LTD., MATROX GRAPHICS INC., MATROX
INTERNATIONAL CORP., and MATROX TECH, INC.

8 UNITED STATES DISTRICT COURT
9
10 NORTHERN DISTRICT OF CALIFORNIA
11 SAN FRANCISCO DIVISION

12 RICOH COMPANY, LTD.,

13 Plaintiff,

14 vs.

15 AEROFLEX INCORPORATED, AMI
SEMICONDUCTOR, INC., MATROX
16 ELECTRONIC SYSTEMS, LTD., MATROX
GRAPHICS INC., MATROX
17 INTERNATIONAL CORP., MATROX TECH,
INC., and AEROFLEX COLORADO SPRINGS,
INC.,

18 Defendants.
19

Case No. C03-4669 MJJ (EMC)

**DEFENDANTS' MOTION FOR SUMMARY
JUDGMENT REGARDING THE SCOPE OF
PATENT DAMAGES FOR ALLEGED
INFRINGEMENT OF U.S. PATENT NO.
4,922,432**

CONFIDENTIAL - FILED UNDER SEAL

[SUMMARY JUDGMENT MOTION NO. 7]

Date: September 26, 2006
Time: 9:30 a.m.
Courtroom: 11, 19th Floor
Judge: Martin J. Jenkins

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22 **CONFIDENTIAL - FILED UNDER SEAL**
23 **PURSUANT TO PROTECTIVE ORDER**

24 **REDACTED PUBLIC VERSION**
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TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	SUMMARY OF ARGUMENT	1
III.	STATEMENT OF MATERIAL UNDISPUTED FACTS	2
A.	Ricoh's Damages Reports	3
B.	The Accused Process Is Only a Small Portion of the Processes (Design and Manufacturing) That Are Involved In Producing An ASIC Or A Graphics Board	4
C.	Logic Synthesis Occurs For Only A Portion of An ASIC	5
D.	Ricoh Seeks Damages for Matrox's Sales Of Accused Products That Are Designed Outside the United States To Customers Located Outside Of The United States	6
E.	Ricoh Also Seeks Damages For Defendant Aeroflex's Sales Of ASICs To The United States Federal Government	6
F.	Matrox Sells Graphics Boards, Not ASICs	7
IV.	ARGUMENT	7
A.	Ricoh Cannot Recover Damages on ASIC and Graphics Board Sales	7
1.	Ricoh Cannot Recover Damages On ASICs or Graphics Board Sales Because Its Damages Theory Violates the Entire Market Value Rule	7
B.	Foreign Sales For ASICs Where Logic Synthesis Occurred Entirely Outside the United States Should Not Be Incorporated Into Damages	9
1.	Ricoh Cannot Recover Damages Under 271(a) or 271(g) Where Logic Synthesis And Sales Occurred Outside The United States	9
C.	Pursuant To 28 U.S.C. Section 1498(a), Ricoh Is Precluded From Recovering Damages For Sales Of Accused Aeroflex Products To Or For The United States Federal Government	10
D.	Sales Of Products For Which Logic Synthesis Occurred Outside The Damages Period Should Not Be Included	11
E.	Ricoh Cannot Recover Damages On Customer Defendants' ASIC Sales Under 271(g)	11
1.	271(g) does not apply to anything but physical products	12

1	2.	271(g) does not apply unless the output of the patented process is used directly in the manufacture of a product.....	13
2	3.	271(g) does not apply if the output of the patented process is materially changed by a subsequent process	13
3			
4	V.	CONCLUSION	14
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			

TABLE OF AUTHORITIES

CASES

1		
2		
3	<i>Accuscan, Inc. v. Xerox Corp.</i>	
4	1998 U.S. Dist. LEXIS 14242	8
5	<i>Anderson v. Liberty Lobby, Inc.</i>	
6	477 U.S. 242	7
7	<i>Bayer AG v. Housey Pharms. Inc.</i>	
8	340 F.3d 1367	12, 13
9	<i>Hughes Aircraft Co. v. U.S.</i>	
10	29 Fed. Cl. 197, 223 (Ct. Cl. 1993)	10
11	<i>Imonex Services, Inc. v. W.H. Muzprufer Dietmar Trenner GMBH</i>	
12	408 F.3d 1374	7, 8, 9
13	<i>International Rectifier Corp. v. Samsung Electronics Co.</i>	
14	361 F.3d 1355	10
15	<i>Maritimes, Inc. v. Coin Acceptors, Inc.</i>	
16	1995 U.S. Dist. LEXIS 21697	8
17	<i>NTP Inc. v. Research In Motion, Ltd.</i>	
18	418 F.3d 1282	10, 12
19	<i>Phonometrics, Inc. v. N. Telecom, Inc.</i>	
20	133 F.3d 1459	7
21	<i>State Industrial, Inc. v. Mor-Flo Industrial, Inc.</i>	
22	883 F.2d 1573	7
23	<i>Volovik v. Bayer Corp.</i>	
24	2004 U.S. Dist. LEXIS 300	8

STATUTES

25	35 U.S.C. §§ 271	2, 9
26	35 U.S.C. § 271	9
27	35 U.S.C. § 271(g)	13
28	35 U.S.C. § 286	2, 11
	28 U.S.C. § 1498	2, 10, 11

1 **I. INTRODUCTION**

2 Defendants Aeroflex Incorporated, Aeroflex Colorado Springs, Inc. (collectively, "Aeroflex"),
 3 AMI Semiconductor, Inc., Matrox Electronic Systems, Ltd., Matrox Graphics Inc., Matrox
 4 International Corp., and Matrox Tech, Inc. (collectively, "Matrox") (collectively, "the Customer
 5 Defendants") move for summary judgment regarding the scope of patent damages, if any, that are
 6 available to Plaintiff Ricoh Company, Ltd. ("Rico") should it prevail on its claim that the Customer
 7 Defendants infringe U.S. Patent No. 4,922,432 ("the '432 patent").

8 For the reasons set forth below, the Customer Defendants request that the Court grant their
 9 motion and preclude Rico from recovering damages for: (1) royalties based on Customer Defendants'
 10 sales of ASICs and/or graphics boards because Rico's damages theory violates the Federal Circuit's
 11 well-settled entire market value rule relating to patent damages; (2) defendant Matrox's sales of
 12 graphics boards that were designed and sold outside the United States; (3) defendant Aeroflex's sales
 13 of ASICs to the United States federal government; (4) defendant Matrox's sales of graphic boards
 14 designed before Rico is legally allowed to recover damages in this matter; and (5) Customer
 15 Defendants' ASIC sales under 271(g).

16 **II. SUMMARY OF ARGUMENT**

17 Rico accuses the Customer Defendants of infringing method claims 13-17 of the '432 patent,
 18 which is directed to a method of designing application specific integrated circuits ("ASICs"). Rico
 19 alleges that the Customer Defendants infringe claims 13-17 of the '432 patent through the use of
 20 Synopsys' Design Compiler system that the Customer Defendants license from Synopsys. Rico
 21 contends that it is entitled to damages due to the Customer Defendants' alleged infringement of the
 22 '432 patent. Specifically, Rico seeks _____ in total damages. Rico's damages number is
 23 comprised of \$ _____ for sales of graphics boards designed and sold inside and outside the United
 24 States by defendant Matrox, \$ _____ for sales of ASICs by defendant AMI, and \$ _____ for
 25 sales of ASICs by defendant Aeroflex.

26 However, Rico's damages theory is legally flawed. First, Rico improperly seeks to recover
 27 damages for sales of ASICs sold by AMI and Aeroflex and damages for sales of graphics boards sold
 28

1 by Matrox in violation of the entire market value rule. There is no evidence that the use of the
 2 patented process drives demand for either the ASICs or the graphics boards. Accordingly, Ricoh
 3 cannot recover damages based on the sales of ASICs and graphics boards as a matter of law. On this
 4 basis, the royalty base in the damages analysis must be restricted to the value of the accused process.¹

5 Second, Ricoh improperly seeks damages based on defendant Matrox's sales of graphics
 6 boards that were designed outside of the United States and sold outside of the United States. Ricoh is
 7 not able to recover for any sales of graphics boards or designs for graphics boards Matrox created
 8 entirely outside the United States because there is no liability under 35 U.S.C. § 271(a) or 271(g) for
 9 these sales.² Indeed, with regard to many of the Matrox graphics boards products at issue, it is
 10 undisputed that the alleged act of infringement, synthesizing the logic for the ASIC, occurred outside
 11 the United States. As a matter of law, Ricoh cannot recover damages related to sales of graphics
 12 boards that were both designed and sold outside the United States. On this basis, \$ must
 13 be subtracted from Ricoh's proposed royalty base.

14 Third, Ricoh improperly seeks to recover damages for defendant Aeroflex's sales of ASICs to
 15 the United States Federal Government. These sales are also precluded as a matter of law pursuant to
 16 28 U.S.C. § 1498(a). On this basis, \$ must be subtracted from Ricoh's proposed royalty
 17 base.

18 Fourth, Ricoh should be excluded from recovering damages based on alleged infringement that
 19 occurred outside of the damages period pursuant to 35 U.S.C. § 286. On this basis, \$ must
 20 be subtracted from Ricoh's proposed royalty base.

21 Finally, Ricoh cannot recover damages on Customer Defendants' ASIC sales under 271(g).

22 **III. STATEMENT OF MATERIAL UNDISPUTED FACTS**

23
24
25
26 ¹ However, neither of Ricoh's damages experts have calculated a royalty base based on the value of the accused process.

27 ² The Customer Defendants dispute that 271(g) applies to products designed in the United States. However, to the extent
 28 that Ricoh argues that it does (and therefore creates an alternative basis for liability for ASICs sales), the same 271(g)
 arguments apply to the designs created within the United States.

A. Ricoh's Damages Reports

Ricoh served two separate damages reports. The expert report of R. Fred Lipscomb focuses primarily on the royalty rate. Indeed, Mr. Lipscomb's describes the limits of his opinion as follows:

Counsel for plaintiff, Ricoh Company, Ltd. (Ricoh) has retained me to provide an opinion regarding what would constitute a reasonable royalty rate to be used to calculate damages to be paid by defendants to Ricoh, for use of its patent in suit, US 4,922,432 (432 patent) issued May 1, 1990

De Mory Decl., Exh. 54 [Expert Report of R. Fred Lipscomb].

Mr. Lipscomb's expert report opines that the reasonable royalty rate should be 4.39%. De Mory Decl., Exh. 54 [Lipscomb Report at 23]. Although Mr. Lipscomb's expert report does not provide any identification or discussion of what specific sales of Customer Defendants' products should be included in the royalty base, his report instead, includes the following conclusory language:

"This royalty rate should be multiplied against the net sales of each of the defendant's products made using the patented process, in the form as first put into the stream of commerce, to obtain the royalty obligations for each fiscal quarter as damages for infringement of the 432 patent."

De Mory Decl., Exh. 54 [Lipscomb Report at 24].

Mr. Lipscomb's expert report does not calculate damages. Instead, Ricoh relies on another "expert," Maureen Loftus, who describes her assignment as follows in her report:

6. I have calculated plaintiff's damages, attributable to each defendant, by (i) aggregating the alleged infringing sales revenues for the products identified by each of the defendants; and (ii) multiplying those sales revenues by the royalty rate provided by Mr. R. Fred Lipscomb, Ricoh's licensing expert.

De Mory Decl., Exh. 55 [Expert Report of Maureen S. Loftus at 2-3]

Ms. Loftus' report also states that she has "not been asked to form an opinion as to the reasonableness" of Mr. Lipscomb's proposed royalty rate. *Id.* Ms. Loftus provides no opinion on the appropriate royalty base.

De Mory Decl., Exh. 55 [Loftus Report at 2].

Neither Mr. Lipscomb's nor Ms. Loftus' expert reports opine, analyze or discuss what drives the demand for the Customer Defendants' accused products. Instead, Ms. Loftus simply applies Mr. Lipscomb's , royalty rate to \$ of ASIC sales made by AMI and \$. of ASIC

1 sales made by Aeroflex, and \$ of sales of graphics boards made by Matrox to derive an
2 alleged damages figure of \$

3 **B. The Accused Process Is Only a Small Portion of the Processes (Design and**
4 **Manufacturing) That Are Involved In Producing An ASIC Or A Graphics Board**

5 For purposes of damages in this case, it is important to put the role that the accused process
6 plays in context. Significantly, the accused process (logic synthesis) is only a small portion of the
7 process of designing and manufacturing an ASIC.³ There are two main phases required to produce
8 ASICs. First, the ASIC must be designed. Second, the ASICs themselves are manufactured.

9 The ASIC design process includes many steps. These steps include, but are not limited to,
10 initial specification creation, simulation, synthesis, floor planning (including place and route), and
11 verification. *See* Declaration of Denise M. De Mory in Support of Defendants' Motion for Summary
12 Judgment Regarding the Scope of Patent Damages ("De Mory Decl."), Exhs. 57 and 58 [Chiappini
13 Dep. Tr. Vol. 3, p. 283-285, 293; *Ricoh* Dkt. No. 305 [Declaration of Erik Olson in Support of
14 Defendants' Motion for Summary Judgment on Noninfringement Under 35 U.S.C. § 271(g) ("Olson
15 Decl.")]. The design phase ends with the creation of mask data, by programs other than the Design
16 Compiler system. *See* Olson Decl., ¶ 7. After the mask data is created, the manufacturing process
17 begins. De Mory Decl. Exh. 60; (*Ricoh* Dkt. No. 306 [Declaration of Michael Heynes in Support of
18 Defendants' Motion for Summary Judgment on Noninfringement Under 35 U.S.C. § 271(g) ("Heynes
19 Decl."), ¶ 4].

20 In the initial phase of the manufacturing process, the physical masks needed to manufacture the
21 ASIC are created. *See* Heynes Decl., ¶¶ 5 and 6. The masks are sent to a foundry that then transfer,
22 through a series of steps, the designs on the masks to a silicon wafer. *See* Heynes Decl., ¶¶ 12-14. The
23 wafer is then further processed and, ultimately, individual ASICs are packaged, generally at a different
24 facility, and often in a different country, than the foundry. Then, the ASICs can be sold.

27 ³ Ricoh consistently attempts to conflate the design and manufacturing process. Indeed, Ricoh has, claimed that the '432
28 patent covers the process for manufacturing an ASIC, which the Court has already determined it did not.

1 In the case of Matrox, in addition to the entire ASIC process described above, it must design
2 the graphics board on which the ASIC will ultimately be contained. *See* De Mory Decl., Exh. 56
3 [Chiappini Dep. Tr. Vol. 1, p. 70, ll. 13-23]. This includes designing or identifying the other
4 components for the board, as well as physically manufacturing the boards.

5 It is important to realize that only the step above called "synthesis" includes the Design
6 Compiler system processing that is allegedly covered by the '432 patent. It is undisputed that logic
7 synthesis is simply one out of many steps in the production of an ASIC, and the data that is output
8 from the logic synthesis step undergoes substantial transformation prior to becoming a saleable ASIC
9 or graphics board.

10 **C. Logic Synthesis Occurs For Only A Portion of An ASIC**

11 Moreover, for many of the accused ASICs or graphics boards, the accused process was used
12 only to synthesize a small portion of the logic level design of the ASIC. First, the Customer
13 Defendants all use Design Compiler for logic synthesis of only the digital portion of what are known
14 as mixed signal ASICs. Mixed signal ASICs are ASICs that have an analog and a digital portion. In
15 the case of the accused products of the Customer Defendants, a large number of the accused ASICs are
16 mixed signal ASICs for which the analog portion of the designs did not use Design Compiler at all.
17 Casavant Decl., ¶ 8.

18
19
20
21 Casavant Decl., ¶ 9.

22 In addition, there are other portions of an ASIC that Design Compiler does not synthesize. For
23 example, Design Compiler does not synthesize instantiated pad cells, asynchronous logic, and hand-
24 instantiated logic. Casavant Decl., ¶ 10. No analysis has been provided by Ricoh with regard to this
25 list of things that Design Compiler does not synthesize.

The items listed above,
 occur frequently in the Customer Defendants' accused products. None of
 these items undergoes logic synthesis, and yet must be included in the final ASIC.

**D. Ricoh Seeks Damages for Matrox's Sales Of Accused Products That Are Designed
 Outside the United States To Customers Located Outside Of The United States**

The following Matrox ASICs were designed outside the United States:

⁵. De Mory Decl., Exhs. 60 and
 61 [Matrox Graphics and Matrox Electronic Systems Product Declarations]. In addition to providing
 information on where each ASIC was designed, Matrox provided information to Ricoh in the form of
 native Microsoft Excel files to identify the shipping address of its customers, including whether they
 are located in the United States. De Mory Decl., Exh. 62 [MGI 688426 – MGI 688481].

The shipping information associated with each customer number can be compared to the MGI
 and MES sales files. Although defendant Matrox's production of this information in electronic form
 provided Ms. Loftus the facility to identify foreign transactions with minimal effort, she did not do so.
 These foreign sales of graphics boards designed outside the United States comprise \$228,856,583 of
 Matrox sales that Ricoh has inappropriately included in its royalty base.

**E. Ricoh Also Seeks Damages For Defendant Aeroflex's Sales Of ASICs To The
 United States Federal Government**

Aeroflex has supplied radiation hardened ASICs to or for government customers. De Mory
 Decl., Exh. 63 [Schedule 2.1.1 of Wagner Report]. During the damages period, Aeroflex's sales of
 accused ASICs was \$57,360,574. *Id.* Approximately , of these sales, , have been
 documented as being sales to or for government customers. *Id.* Aeroflex sells directly to
 governmental agencies, and also makes sales to the U.S. government through government contractors.
 Some examples of government contractors that Aeroflex sells to

⁴ Ricoh did not include this product in its damages reports.

⁵ Ricoh did not include this product in its damages reports.

1
2 Milliken Decl., Exh. 1. As a matter of law, these sales should be deducted from the
3 royalty base.

4 **F. Matrox Sells Graphics Boards, Not ASICs**

5 For AMI and Aeroflex, Ricoh's suggested royalty base includes the sales of the accused ASICs.
6 However, for Matrox, Ricoh's suggested royalty base apparently includes the sales of its graphics
7 boards that include one or more accused ASICs. A graphics board sells for upward of several hundred
8 dollars to over a thousand dollars, while an ASIC sells for less than a hundred dollars. Wagner Decl.,
9 Exh. 1 [Wagner Report page 37]. The average cost of an ASIC for a Matrox board is only of the
10 cost of the graphics board. Wagner Decl., Exh.1 [Wagner Report schedule 8.1.5.]

11 **IV. ARGUMENT**

12 A motion for summary judgment should be granted when the Court determines that there is no
13 genuine issue of material fact to be tried and the moving party is entitled to judgment as a matter of
14 law. Fed. R. Civ. P. 56(c); *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247 (1986); *Phonometrics,*
15 *Inc. v. N. Telecom, Inc.*, 133 F.3d 1459, 1463 (Fed. Cir. 1998). Summary judgment is appropriate
16 when no "reasonable jury could return a verdict for the nonmoving party." *Anderson*, 477 U.S. at 247-
17 48. Notably, "the mere existence of *some* alleged factual dispute between the parties will not defeat an
18 otherwise properly supported motion for summary judgment; the requirement is that there be no
19 *genuine* issue of material fact." *Id.*

20 **A. Ricoh Cannot Recover Damages on ASIC and Graphics Board Sales**

21 **1. Ricoh Cannot Recover Damages On ASICs or Graphics Board Sales**

22 **Because Its Damages Theory Violates the Entire Market Value Rule**

23 Under well-settled Federal Circuit law, the "entire market value rule" permits recovery of
24 damages based on the value of an entire product including several features *only* where the basis for
25 customer demand is the patented feature. *See Imonex Services, Inc. v. W.H. Muzprufer Dietmar*
26 *Trenner GMBH*, 408 F.3d 1374, 1379 (Fed. Cir. 2005), citing *State Indus., Inc. v. Mor-Flo Indus., Inc.*,
27 883 F.2d 1573, 1580 (Fed. Cir. 1989). However, both of Ricoh's expert reports fail to contain any
28 evidence that the customer demand for Aeroflex's and AMI's ASICs, and Matrox's graphics boards, is

1 based on the use of the Synopsys Design Compiler system for logic synthesis for ASICs.⁶ Therefore,
 2 as a matter of law, Ricoh cannot use the entire market value rule. *See Imonex*, 408 F.3d at 1380;
 3 *Volovik v. Bayer Corp.*, 2004 U.S. Dist. LEXIS 300, *28-32 (D. Minn. January 7, 2004) (summary
 4 judgment motion granted prohibiting use of entire market value rule where there was no evidence that
 5 allegedly infringing pumps were the basis of the customer demand for an immunoassay system);
 6 *Accuscan, Inc. v. Xerox Corp.*, 1998 U.S. Dist. LEXIS 14242, *28-31 (S.D.N.Y. September 10, 1998)
 7 (new trial on damages granted where there was no evidence in the record that the patented invention of
 8 calibrating electric signals formed the basis for customer demand for copier, facsimile, and scanner
 9 products); *Mars, Inc. v. Coin Acceptors, Inc.*, 1995 U.S. Dist. LEXIS 21697, *6-9 (D.N.J. October 30,
 10 1995) (entire market value rule not applicable where there was no evidence that basis for customer
 11 demand for coin changer was patented coin tube feature).

12 Without providing any analysis at all regarding the relationship between the claimed method of
 13 the '432 patent and the Customer Defendants' accused products, Mr. Lipscomb determined that a
 14 royalty rate of _____ should be applied to "the net sales of each of the defendant's products made
 15 using the patented process, in the form as first put into the stream of commerce." De Mory Decl., Exh.
 16 54 [Lipscomb Report at 24]. Again, without any analysis, Ms. Loftus applied Mr. Lipscomb's royalty
 17 rate to the Customer Defendants' sales of ASICs for AMI and Aeroflex and graphics boards for
 18 Matrox. *See* De Mory Decl., Exh. 55.

19 Ricoh's damages analysis clearly violates the entire market value rule. The *Imonex* case is
 20 particularly instructive. The patents at issue involved a coin selector used in pay-per-use laundry
 21 machines. After a jury decided that the plaintiff's patents for coin selectors were infringed, the District
 22 Court held a trial on damages.

23 Before trial, the plaintiff sought damages based not only on the value of the coin selecting
 24 apparatus, but on the entire laundry machine to which the coin operation was installed. *Imonex*, 408
 25 _____

26 _____
 27 ⁶ Indeed, it is undisputed that the Customer Defendants' use of the Synopsys Design Compiler system for logic synthesis
 28 does *not* serve as the basis for customer demand for either ASICs or graphics boards. *See* Declaration of Peter Milliken ¶5
 and Declaration of David Chiappini ¶5.

1 F.3d at 1379. After being precluded from such a damages theory based upon the entire laundry
 2 machine, the court *sua sponte* allowed a claim for damages for the coin selectors, but the jury
 3 apparently made its award based upon the entire market value rule, which the Court then rejected and
 4 ordered a new trial on damages.

5 In the second trial on damages, the defendants' damages expert testified about the income
 6 attributable to the coin selectors. The jury then awarded a greatly decreased amount of damages.
 7 Imonex appealed the Court's decision to exclude its expert's testimony on the entire market value rule.
 8 After indicating that the proposed testimony did not bear any relation to the rule, the Federal Circuit
 9 held that, "[w]ithout any evident record that the patented features were the basis for customer demand
 10 for the laundry machines as a whole, the trial court properly foreclosed further evidence on this
 11 unsupported theory." *Id.* at 1380.

12 In this case, neither one of Ricoh's damages expert reports provide any evidence that logic
 13 synthesis using Synopsys' Design Compiler system was the basis for customer demand for the
 14 Customer Defendants' ASICs or graphics boards. Ricoh should be foreclosed from pursuing this
 15 unsupported theory of damages at trial. Therefore, as a matter of law, Ricoh cannot recover damages
 16 under the entire market value rule for the sale of these products.

17 **B. Foreign Sales For ASICs Where Logic Synthesis Occurred Entirely Outside the**
 18 **United States Should Not Be Incorporated Into Damages**

19 **1. Ricoh Cannot Recover Damages Under 271(a) or 271(g) Where Logic**
 20 **Synthesis And Sales Occurred Outside The United States**

21 As a matter of law Ricoh cannot recover damages for products designed outside of the United
 22 States and sold outside of the United States. The only section of the Patent Statute that applies to
 23 methods performed outside the United States is 35 U.S.C. § 271(g). Plaintiff cannot recover damages
 24 under 35 U.S.C. § 271(a).

25 There is no dispute that the following Matrox ASICs contained in its graphics boards were
 26 completely designed outside the United States:

27 . Sales of the graphics boards containing these ASICs outside the
 28 United States fall outside the scope of Section 271(a). *See NTP*, 418 F.3d at 1313 ("The territorial

reach of section 271 is limited. Section 271(a) is only actionable again patent infringement that occurs within the United States.”); *see also International Rectifier Corp. v. Samsung Elecs. Co.*, 361 F.3d 1355, 1360 (Fed. Cir. 2004).⁷ Since the Matrox graphics boards containing the ASICs listed above were sold to foreign customers, as a matter of law, 271(g) also does not apply. Therefore, foreign sales of \$_____ for the graphics boards including these ASICs should be removed from the Ricoh’s proposed royalty base.

C. Pursuant To 28 U.S.C. Section 1498(a), Ricoh Is Precluded From Recovering Damages For Sales Of Accused Aeroflex Products To Or For The United States Federal Government.

Ricoh’s proposed royalty base is also overstated and improper because, as a matter of law, Ricoh is precluded from recovering any damages from defendant Aeroflex for the sales of any Aeroflex products made to or for the United States Federal Government. Section 1498(a) provides in pertinent part:

Whenever a patented invention described in and covered by a patent of the United States is used or manufactured by or for the United States without license ... *the owner’s remedy shall be by action against the United States in the United States Court of Federal Claims* for the recovery of his reasonable and entire compensation for such use and manufacture.... [T]he use or manufacture of an invention described in and covered by a patent of the United States *by a contractor, a subcontractor, or any person, firm, or corporation for the Government and with the authorization and consent of the Government*, shall be construed as use or manufacture for the United States.

28 U.S.C. § 1498(a) (emphasis added).

Under this statute, there are two types of authorization and consent. The authorization may be either explicit, or it may be implied. *See Hughes Aircraft Cl. v. U.S.*, 29 Fed. Cl. 197, 223 (Ct. Cl. 1993). There are express authorization and consent clauses in effect for \$_____ of sales of Aeroflex ASICs to or for the United States. De Mory Decl., ¶ 66. These sales should be removed

⁷ In addition, for 271(a) to be applicable for a process patent, every step of the process must occur in the United States. *See NTP*, 418 F.3d at 1318 (“[w]e therefore hold that a process cannot be used “within” the United States as required by *section 271(a)* unless each of the steps is performed within this country.”) Therefore, under 271(a) Ricoh is unable to recover damages for the AMI and Matrox products designed entirely outside the United States, as well as for any ASICs where any step in the claimed process occurred outside the U.S.

1 from Ricoh's proposed royalty base. There is an additional \$ of Aeroflex ASIC sales for
 2 which there is documentation showing sales to or for the United States for which authorization and
 3 consent may be implied.⁸ De Mory Decl., ¶ 66. These sales should also be removed from Ricoh's
 4 proposed royalty base. Therefore, Ricoh is not entitled to receive damages on a total of \$ of
 5 Aeroflex sales pursuant to 28 U.S.C. § 1498(a).

6 **D. Sales Of Products For Which Logic Synthesis Occurred Outside The Damages**
 7 **Period Should Not Be Included**

8 Patent damages law is clear that "[e]xcept as otherwise provided by law, no recovery shall be
 9 had for any infringement committed more than six years prior to the filing of the complaint or
 10 counterclaim for infringement in the action." (35 USC § 286)

11 Ricoh has claimed damages for the VIA/1 product.⁹ As Eric Boisvert, the Vision Processor
 12 Product Line Supervisor, testified, the VIA/1 product did not undergo synthesis. See De Mory Decl.,
 13 Exh. 65 [Boisvert Depo. Tr. at 201 and 215]. Instead, it reused the synthesis from the VIA/0 product.
 14 Id. at 202-215. The synthesis for the VIA/0 product occurred prior to the start of the damages period
 15 which is January 20, 1997 – six years prior to the filing of the complaint. Id. at 215. Therefore, there is
 16 no synthesis in the VIA/1 product that occurred during the damages period of this case. Accordingly,
 17 the \$ in sales of the VIA/1 product should be removed from the royalty base for Matrox
 18 Electronic Systems. De Mory Decl., Exh. 55 [Loftus Report at 8].

19 **E. Ricoh Cannot Recover Damages On Customer Defendants' ASIC Sales Under**
 20 **271(g)**

21 Even if Ricoh's damages analysis did not violate the entire market value rule, Ricoh would still
 22 not be able to recover damages based on Customer Defendants ASIC sales pursuant to 271(g) for three
 23
 24
 25

26 ⁸ There are a number of instances where Aeroflex believes that there is an express authorization and consent clause, but the
 source contract cannot be located. In these circumstances, the sales have been included in the implied category.

27 ⁹ The VIA/1 was mistakenly included on the supplemental product declaration based on a misunderstanding of the scope of
 28 products that should be included.

1 reasons.¹⁰ First, the output of the patented process is information, not a physical product. Second, the
 2 ASICs are not “made by” the allegedly infringing process. Third, the output of the allegedly infringing
 3 process is “materially changed” by subsequent processes prior to the manufacture of the ASICs.

4 **1. 271(g) does not apply to anything but physical products**

5 The output of the claimed process is a netlist for claims 13 and 15-17, and mask data for claim
 6 14. Neither a netlist nor mask data is a physical product. Instead, both are information. Since 271(g)
 7 is applicable only to physical products, and not to information, it does not apply to the output from
 8 these method claims. *See NTP, Inc. v. Research In Motion, Ltd.*, 481 F.3d 1282, 1323 (Fed. Cir. 2005).

9 In *NTP*, the claims at issue were directed to methods for the transmission of information in the
 10 form of email messages. After reiterating that the production of information was not covered by
 11 271(g), since the patented process must include the manufacturing of a physical product for 271(g) to
 12 be applicable, the Court said that, “[b]ecause the ‘transmission of information,’ like the ‘production of
 13 information,’ does not entail the manufacturing of a physical product, section 271(g) does not apply to
 14 the asserted method claims in this case any more than it did in *Bayer*.” *Id.* *See also Bayer AG v.*
 15 *Housey Pharms. Inc.*, 340 F.3d 1367, 1377 (Fed. Cir. 2003) (“in order for a product to have been
 16 ‘made by a process patented in the United States’ it must have been a physical article that was
 17 ‘manufactured’ and that the production of information is not covered.”) In this case, as in *Bayer* and
 18 *NTP*, the output of the process is information, in the form of a netlist or mask data, rather than a
 19 manufactured physical product. Therefore, 271(g) does not apply in this case any more than it did in
 20 *Bayer* or *NTP*.

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 26 ¹⁰ Ricoh cannot claim board sales because under no circumstances is the output of design compiler used directly in the
 27 manufacture of graphics boards. Except in a few cases, Matrox does not sell its ASICs directly to its customers. Instead,
 28 Matrox includes its ASICs on its sophisticated graphics boards.

(Wagner Decl. Exh. 1 (Sch. 8.1.5))

2. 271(g) does not apply unless the output of the patented process is used directly in the manufacture of a product

As discussed above, the output of the patented process is a netlist or mask data, not an ASIC. The Court in *Bayer* indicated that “the process must be used directly in the manufacture of the product.” *Id.* at 1378. In this case, under no circumstances can the data that is the output of Design Compiler be used directly in the manufacture of an ASIC. In the first instance, the output of Design Compiler is just one of many steps in the design process. More importantly, in the case of the ASICs at issue here – the output of Design Compiler, alone, cannot be used to manufacture the ASIC. As Ricoh has now discovered,

This other information must be combined with the output from Design Compiler.

In addition, the netlist output from Design Compiler must be modified by the place-and-route process to create another netlist, which is processed to generate GDSII data, which is further processed to produce mask data. Netlists and mask data are not used to manufacture an ASIC at all. Photomasks, which are generated from mask data, are used in the actual manufacture of an ASIC.

The output of the patented process is either a netlist or mask data. Since neither a netlist nor mask data is used directly in the manufacture of an ASIC, the ASICs are not “made by” a patented process. Therefore, 271(g) is not applicable to the ASICs.

3. 271(g) does not apply if the output of the patented process is materially changed by a subsequent process

Section 271(g)(1) provides that a product will not be considered to be “made by” a patented process if “it is materially changed by a subsequent process.” 35 U.S.C. § 271(g)(1). Before an ASIC is produced, the netlist output from Design Compiler is materially changed. First,

Second, the combined netlist partially output from Design Compiler, and otherwise created by hand or with other software,

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4 These masks are then used in the
5 generation, layer by layer, of the final ASIC, which is then packaged and sold.
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10 These ASICs may be sent to yet another location for
11 packaging.

12 Clearly, the output of the patented process is materially changed before an ASIC is produced.
13 Therefore, the ASIC cannot be considered to be “made by” the patented process, and cannot be
14 covered by 271(g).

15 **V. CONCLUSION**

16 For all the foregoing reasons, the Customer Defendants respectfully request that this Court
17 grant their motion for summary judgment and preclude Ricoh from recovering damages for: (1)
18 royalties based on the sales of the Customer Defendants’ ASICs and graphics boards, in violation of
19 the Federal Circuit “entire market value rule,” and (2) defendant Matrox’s sales of graphics boards that
20 were designed and sold outside the United States; and (3) defendant Aeroflex’s sales of ASICs to the
21 United States federal government; and (4) defendant Matrox’s sales of graphics boards designed before
22 Ricoh is legally allowed to recover damages in this matter; and (5) Customer Defendants’ ASIC sales
23 under 271(g).
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1 Dated: August 18, 2006

Respectfully submitted,

2 HOWREY LLP

3
4 By: /s/ Denise M. De Mory

5 Denise M. De Mory

6 Attorneys for Plaintiff

7 SYNOPSISYS and Defendants AEROFLEX

8 INCORPORATED, AEROFLEX

9 COLORADO SPRINGS, INC., AMI

10 SEMICONDUCTOR, INC., MATROX

11 ELECTRONIC SYSTEMS, LTD.,

12 MATROX GRAPHICS INC., MATROX

13 INTERNATIONAL CORP., and

14 MATROX TECH, INC.